# REMARKS/ARGUMENTS

This application is a 35 U.S.C. § 371 national phase conversion of PCT/ES2003/000400, filed July 31, 2003, which claims the priority of Spanish Application No. P200201810, filed July 31, 2002.

The Notice of Non-Compliant Amendment argued that a complete listing of all the claims were not present and the original filed claims were 1-16 and the Preliminary Amendment only submitted claims 1-15.

With the filing of this national phase, Applicant included the PCT International Preliminary Examination Report ("IPER") which included the claims. Upon inspection of the U.S. Patent and Trademark Office's web page, the IPER was received with the national phase filing and a copy of the IPER is attached. It is believed that the Examiner failed to review the claims contained in the IPER which supersedes the original filed claims. Accordingly, the Preliminary Amendment filed with this application includes the correct total amount of 15 claims.
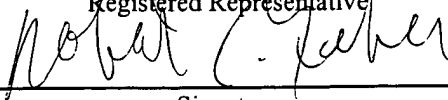
In view of the foregoing, Applicant respectfully requests reconsideration and allowance of the application.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to:

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA  22313-1450, on January 27, 2006:

Robert C. Faber
_____
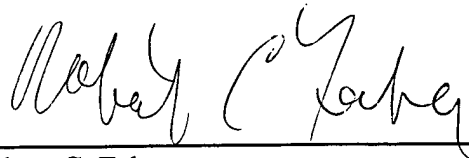Name of applicant, assignee or
Registered Representative

_____
Signature

January 27, 2006
_____
Date of Signature

RCF:rra

Respectfully submitted,

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# PATENT COOPERATION TREATY

## PCT

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT
## (PCT Article 36 and Rule 70)

| Applicant's or agent's file reference<br>PXWO00311/2003 | FOR FURTHER ACTION | See Notification of Transmittal of International<br>Preliminary Examination Report (Form PCT/IPEA/416) |
|---|---|---|
| International application No.<br>PCT/ES 03/00400 | International filing date *(day/month/year)*<br>31.07.2003 | Priority date *(day/month/year)*<br>31.07.2002 |

| International Patent Classification (IPC) or both national classification and IPC<br>H04Q7/32 |
|---|

| Applicant<br>VODAFONE GROUP PLC et al. |
|---|

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 8 sheets, including this cover sheet.

   ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

   These annexes consist of a total of 3 sheets.

3. This report contains indications relating to the following items:

   I  ☒  Basis of the opinion

   II  ☐  Priority

   III  ☐  Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

   IV  ☐  Lack of unity of invention

   V  ☒  Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

   VI  ☐  Certain documents cited

   VII  ☐  Certain defects in the international application

   VIII  ☐  Certain observations on the international application

| Date of submission of the demand<br><br>24.02.2004 | Date of completion of this report<br><br>15.12.2004 |
|---|---|
| Name and mailing address of the International preliminary examining authority:<br>European Patent Office<br>D-80298 Munich<br>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br>Fax: +49 89 2399 - 4465 | Authorized Officer<br><br>Aullo Navarro, A<br><br>Telephone No. +49 89 2399-2267 |

## I. Basis of the report

1. With regard to the **elements** of the international application *(Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):*

   **Description, Pages**

   1-11            filed with the demand

   **Claims, Numbers**

   1-15            filed with telefax on 03.12.2004

   **Drawings, Sheets**

   1/3-3/3         as published

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

   These elements were available or furnished to this Authority in the following language:   ENGLISH  , which is:

   ☐   the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).

   ☐   the language of publication of the international application (under Rule 48.3(b)).

   ☒   the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

   ☐   contained in the international application in written form.

   ☐   filed together with the international application in computer readable form.

   ☐   furnished subsequently to this Authority in written form.

   ☐   furnished subsequently to this Authority in computer readable form.

   ☐   The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

   ☐   The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

   ☐   the description,     pages:

   ☐   the claims,         Nos.:

   ☐   the drawings,      sheets:

5. ☐   This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

**V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

| | | | |
|---|---|---|---|
| Novelty (N) | Yes: | Claims | 1-15 |
| | No: | Claims | |
| Inventive step (IS) | Yes: | Claims | 1-15 |
| | No: | Claims | |
| Industrial applicability (IA) | Yes: | Claims | 1-15 |
| | No: | Claims | |

2. Citations and explanations

   **see separate sheet**

**V. Statement under Article 35(2) PCT:**

i)   Reference is made to the following documents:

 D1:  ES-T3-2 149 801
 D1': EP-A-0 562 890

 Document D1' was published on 29.09.93. It corresponds to document D1 (cited
 in the International Search Report), the contents of both documents being equiva-
 lent. Since D1' uses the language chosen for the purposes of the international pre-
 liminary examination, reference will be made in the following to the text passages
 of D1', in order to facilitate comprehension. A copy of D1' is annexed to this Writ-
 ten Opinion.

ii)  The following statement is made on the question of inventive step in respect of the
 present claims:

1.   For the purpose of the present evaluation in respect of novelty and inventive step,
 the subject-matter of the claims has been interpreted as if the problems of clarity
 identified below (see "Certain Observations" under Section iii) ) had been over-
 come by way of the necessary amendments (PCT Guidelines I-4.3).

2.   The present application relates to a mobile telephone **device** (Claim 1) comprising
 an integrated circuit card with a subscriber identity module SIM or a universal sub-
 scriber identity module USIM, and with means for storing at least one application,
 the device comprising also means for <u>remote access management of the card</u>
 based on the reception of remote access messages by mobile telephony, as well
 as it relates also to a corresponding **method** (Claim 9) of <u>managing data in arrays</u>
 <u>of stored applications.</u>

2.1  The applications **existing** in the SIM card capable of sending commands to the
 mobile terminal are generally called Toolkit applications, which are an optional
 feature of both SIM cards and UICC cards specified in the GSM and UMTS stan-
 dards. These standards define the storage in the SIM/USIM of data in a structured
 form (e.g., in "binary" and "formatted" fields, respectively corresponding to "trans-
 parent" and "linear fixed" elementary *files* e.g. in GSM), whereas data forming part

of applications generally have a proprietary format chosen by the developers, i.e. they are not subject to the standardised formatted structure in fields of a file, but are rather stored in *arrays* corresponding to the application code and its relevant data. It is **known** to remotely access "Over The Air" (OTA) the SIM/USIM card (see e.g. Figs. 1 and 2) to modify the content of some files (3F) in the card, to modify the customization profile, and to load or modify Toolkit applications (3A, 4A): in particular, the remote <u>loading of entire applications</u> (3A, 4A) is standardized, requiring any particular (i.e., proprietary) data to be stored in an <u>array (4D) forming part of the application itself (4A)</u> when it is downloaded remotely in the card, by contrast to applications (3A) employing standardised (formatted) data (3D) associated with (but not forming part of) them that have their data stored in a (structured) file (3F) to which standardized remote access is possible, as indicated just above.

2.2    The **problem** is that remote <u>access via OTA to specific data stored in arrays is not defined</u> in any way, as they do not have a formatted structure permitting to identify and access the specific data in an array (by contrast to the case of files). Thus, when it is currently desired to modify one piece of these (proprietary) data (4D), an application (4A) must be deleted and completely reloaded with the modified data. This results in the <u>loss of all the information</u> that the subscriber may have introduced <u>to customize the application,</u> and represents moreover an <u>inefficient procedure</u> (with respect to the modification of only the data whose modification is desired).

3.     The **invention** hence lies in that the above-mentioned drawbacks in the prior art are solved, according with the characterising features of Claims 1 and 9, with the provision of a <u>module for managing data arrays</u> (data array manager module) of at least one application stored in the card. Upon <u>reception of a remote access message (OTA message) with at least one instruction</u> regarding at least one operation (read, write, etc.) to be performed on at least one piece of data in an array of a specified application, the data array manager module <u>analyses the instruction (to thereby identify the array</u> to be modified, e.g. by means of the application identifier AID and an identification number of the array assigned during programming) and then <u>makes a call to the specified application</u> requesting a reference to the array, the data array manager module <u>receiving from the application the requested reference to access the array</u> based on the reference <u>and perform the operation(s) on at least one piece of data in the array according to the instruction(s).</u>

· In this way, access to a particular array (e.g., 4D) forming part of the specified
application is possible, so that its modification can be effected without the need to
delete and replace the entire application (4A), as in the prior art.

4. The claimed solution is neither taught nor suggested by the cited documents D1/
D1', which refer only to the known modification of structured data stored in stand-
ardised files (not arrays) associated with (but not forming part of) an application
already acknowledged as prior art by the Applicant.

5. Therefore, an inventive step can be acknowledged in the subject-matter of indep-
endent Claims 1 and 9, as well as in the subject-matter of their respective depen-
dent Claims 2 to 8 and 10 to 15, which represent further details of implementation
of the corresponding claimed device and method.

   As a consequence, the present application is considered to meet the requirements
   of Article 33(1)-(4) PCT.

iii) Regarding the application documents, certain defects have been noted and cer-
tain observations on their clarity are made in the following:

Certain defects:

6. The opening part of the description has not been modified to bring it into agreem-
ent with the amended independent claims (Rule 5.1(a)(iii) PCT). Particular atten-
tion should have been paid to avoiding any reference to "the invention" or to "emb-
odiments" thereof in parts of the description not falling within the scope of the cla-
ims. Moreover, the features being defined by the independent claims as represen-
tative of the invention should have not been presented in the description as merely
optional.

7. The cited document D1' (D1) has not been acknowledged and briefly discussed in
the opening part of the description (Rule 5.1(a)(ii) PCT), so as to put the invention
into the proper perspective. The statement of problem in the introductory part of

the description has not been revised, following from the disclosure of the cited document D1' (D1)(PCT Guidelines II-4.4 and II-4.6)

Certain observations:

8.    It is clear from the description on page 9, lines 28-35, that the subject-matter of independent Claims 1 and 9 does not include a feature relating to "making a call (M4) to said specified application (4A) requesting a reference to said array (S3)" which is essential to the definition of the invention in respect of the analysis of the received instruction that permits to identify the array to be modified.

Since independent Claims 1 and 9 do not contain this feature, they do not meet the requirement following from Article 6 PCT taken in combination with Rule 6.3(b) PCT that any independent claim must contain all the technical features essential to the definition of the invention.

9.    A similar objection applies also to independent Claim 9 in respect of the following missing features which are essential to the proper definition of the invention in the method category:

i) the claimed method is characterized also in that it is carried out by means of a data array manager module;

ii) the instruction in the received message is "an instruction regarding an operation to be performed on at least one piece of data in one array of a specified application (4A) stored in the card" (the absence of the underlined features leaving undefined that the instruction specifies both a particular application and an operation to be performed);

iii) the "accessing"-step is actually related to the instruction, i.e. it should be directed to "accessing the array (S5) according to said instruction"; and

iv) following from the necessary amendment indicated in i) above, the last step should refer to "performing said operation (S5)" rather than "operating (S5)".

These features should have hence been included also in independent Claim 9.

10. The general statement in the description on page 11, lines 3-6, suggesting that the extent of protection may be expanded in some vague and not precisely defined way, is not clear, and when used to interpret the claims, it renders them also unclear, contrary to Article 6 PCT (cf. also PCT Guidelines 5.30). This statement should therefore be deleted.

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## CLAIMS

1.- A mobile telephone device, comprising:

an integrated circuit card (1) with a subscriber identity module or a universal subscriber identity module, said card (1) comprising means for storing at least one

5   application (3A, 4A);

means for remote access management of the card (1) based on the remote access message reception by mobile telephony;

characterized in that it further comprises

at least one data array manager module (5) for managing data arrays of at

10  least one application stored in the card (1), said data array manager module comprising:

- means for receiving, by means of a remote access message, at least one instruction for operating on at least one piece of data (4D) contained in an array of a specified application (4A);

15  - means for analyzing said instruction;

- means for accessing said array according to said instruction, which further comprise

- means for receiving from the specified application (4A) a requested reference for said array; and

20  - means for accessing the array based on said reference; and,

- means for performing at least one operation on said at least one piece of data (4D) in said array, according to said instruction.

2.- A device according to claim 1, characterized in that the means for accessing said array further comprise:

25  - means for asking the specified application for said reference of the array.

3.- A device according to any of claims 1 and 2, characterized in that the application is a SIM Application Toolkit or Universal SIM Application Toolkit application.

4.- A device according to any of the previous claims, characterized in that the

30  data array manager module (5) is configured to be able to access arrays of a plurality of applications.

5.- A device according to any of claims 1-3, characterized in that the data array manager module is part of the specific application whose data array is to be accessed by said data array manager module.

35  6.- A device according to the previous claim, characterized in that the data

array manager module is an Application Programming Interface.

7.- A device according to any of the previous claims, characterized in that the remote access management means are based on the GSM 03.48 standard or on the 3GPP 23.048 standard.

5      8.- A device according to any of the previous claims, characterized in that it comprises a terminal (20) supporting Subscribir Identity Module (SIM) Application Toolkit or Universal SIM Application Toolkit and supporting Data Download, and/or a class "e" terminal supporting the SIM Toolkit commands for channel management.

9.- A method for managing data in arrays of applications stored in an

10    integrated circuit card (1) of a mobile telephony subscriber equipment, said card (1) storing a subscriber identity module or a universal subscriber identity module, characterized in that the method comprises the steps of:

- receiving a message (M1) from a remote access server (10), with at least one instruction regarding at least one piece of data in one array of one application (4A)

15    stored in the card;

- analyzing the instruction (S2);

- accessing the array (S5), which further comprises the steps of:

    - receiving from the application (4A) a requested reference for said array; and

20       - accessing the array based on said reference;

- operating (S5) on said at least one piece of data in the array based on the instruction.

10.- A method according to claim 9, characterized in that the step of analyzing the instruction (S2) is followed by the step of:

25 .  - asking the application (4A) for a reference of the array (S3).

11.- A method according to any of claims 9 and 10, characterized in that

- the message (M1) is received in a terminal (20) of the subscriber equipment;

- the message is sent from the terminal to the card (1);

- a remote access manager module (2) in the card forwards the instruction (M3) to a

30    data array manager module (5) identified in the message.

12.- A method according to claim 11, characterized in that the message (M1) is of the Data Download type.

13.- A method according to claim 12, characterized in that the message is sent to the card (1) by means of the ENVELOPE command (M2).

35    14.- A method according to claim 11, characterized in that the message (M1)

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is sent to the card through a Bearer Independent Protocol-based channel.

15.- A method according to any of claims 13 and 14, characterized in that the instruction is forwarded to a data array manager module (5) identified by means of the Toolkit Application Reference field of the message.

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